

What is claimed is:

1. A method comprising the steps of:
  - identifying a virtual device associated with a first slot of a plurality of slots;
  - identifying a backup I/O component in a second slot of the plurality of slots; and
  - disassociating the virtual device with the first slot and associating the virtual device with the second slot.
2. The method of claim 1, wherein, prior to the identifying a virtual device step, the method includes the step of detecting a failure of an I/O component in the first slot.
3. The method of claim 1, wherein
  - the identifying a virtual device step comprises accessing a virtual device data structure to identify the virtual device associated with the first slot, the virtual device data structure maintaining an association between a plurality of virtual devices and at least a sub-set of the plurality of slots.
4. The method of claim 2, wherein the step of detecting a failure is performed by a Hot Swap Management System.
5. The method of claim 2, wherein the failure is caused by removal of the I/O component from the first slot.
6. The method of claim 1, wherein the step of disassociating comprises:
  - disassociating the virtual device from a first driver, the first driver being a driver for an I/O component in the first slot;
  - identifying a second driver, the second driver being a driver for the backup I/O component in the second slot; and

associating the second driver with the virtual device.

7. The method of claim 6, wherein the step of identifying the second driver comprises downloading the second driver from a host system.

8. The method of claim 6, wherein the step of identifying the second driver comprises downloading the second driver from the Internet.

9. The method of claim 3, wherein, prior to the identifying a virtual device step, the method comprises the steps of:

generating a system configuration data structure, the system configuration data structure including an entry for each slot of the plurality of slots, each entry including information indicative of an expected I/O device for the corresponding slot and an I/O parameter for the expected I/O device; and

generating the virtual device data structure as a function of the system configuration data structure.

10. The method of claim 9, wherein the I/O parameter includes a plurality of I/O parameters.

11. The method of claim 9, wherein the expected I/O device includes a plurality of expected I/O devices, and wherein the I/O parameter includes one or more I/O parameters for each of the plurality of expected I/O devices.

12. The method of claim 1, wherein the I/O component is one of an ethernet card, a serial port, a parallel port, and an SCSI device.

13. The method of claim 1, wherein the step of disassociating comprises:
- disassociating the virtual device from a first driver, the first driver being a driver for an I/O component in the first slot;
  - associating the virtual device with a virtual driver;
  - identifying a second driver, the second driver being a driver for the backup I/O component in the second slot;
  - disassociating the virtual device from the virtual driver; and
  - associating the second driver with the virtual device.
14. A system comprising:
- a virtual device data structure, the virtual device data structure maintaining an association between a plurality of virtual devices and a plurality of slots in a chassis;
  - a failure detection component, the failure detection component being capable of detecting a failure of an I/O component in one of the plurality of slots;
  - a disconnect component, the disconnect component being capable of disassociating the I/O component from a corresponding one of the virtual devices associated with the one of the plurality of slots holding the I/O component, and identifying a backup I/O component in another one of the plurality of slots based upon the virtual device data structure;
  - a connect component, the connect component being capable of associating the corresponding one of the virtual devices with the backup I/O component.
15. The system of claim 14, wherein the failure detection component, the disconnect component and the connect component are implemented in software.
16. The system of claim 14, wherein the failure detection component is a hot swap management system.

17. A system comprising

a plurality of I/O components secured within respective slots in a chassis, at least two of the plurality of I/O components forming a peripheral failover pair;

a peripheral failover system, the peripheral failover system detecting a failure of one I/O component in the peripheral failover pair and disassociating a virtual device from the failed I/O component and associating the virtual device with the other I/O component in the peripheral failover pair.

18. The system of claim 17, wherein the peripheral failover system includes

a virtual device data structure, the virtual device data structure maintaining an association between a plurality of virtual devices and a plurality of slots in the chassis, the plurality of virtual devices including the virtual device;

a failure detection component, the failure detection component being capable of detecting the failure of the one of the I/O components in the peripheral failover pair;

a disconnect component, the disconnect component being capable of disassociating the one of the I/O components from the virtual device, and identifying the other I/O component in the peripheral failover pair based upon the virtual device data structure;

a connect component, the connect component being capable of associating the virtual device with the other I/O component.

19. The system of claim 18, wherein the failure detection component, the disconnect component and the connect component are implemented in software.

20. The system of claim 19, wherein the failure detection component is a hot swap management system.

21. A computer readable medium, having stored thereon, computer executable process steps operative to control a computer to perform steps comprising:

- identifying a virtual device associated with a first slot of a plurality of slots;
- identifying a backup I/O component in a second slot of the plurality of slots; and
- disassociating the virtual device with the first slot and associating the virtual device with the second slot.

22. The computer readable medium of claim 21, wherein, prior to the identifying step, the computer executable process steps are operative to control a computer to detect a failure of an I/O component in the first slot.

23. The computer readable medium of claim 21, wherein

- the identifying a virtual device step comprises accessing a virtual device data structure to identify the virtual device associated with the first slot, the virtual device data structure maintaining an association between a plurality of virtual devices and at least a sub-set of the plurality of slots.

24. The computer readable medium of claim 21, wherein the step of disassociating comprises:

- disassociating the virtual device from a first driver, the first driver being a driver for an I/O component in the first slot;
- identifying a second driver, the second driver being a driver for the backup I/O component in the second slot; and
- associating the second driver with the virtual device.

25. The computer readable medium of claim 23, wherein, prior to the identifying a virtual device step, the computer executable process steps are operative to control a

computer to perform steps comprising :

generating a system configuration data structure, the system configuration data structure including an entry for each slot of the plurality of slots, each entry including information indicative of an expected I/O device for the corresponding slot and an I/O parameter for the expected I/O device; and

generating the virtual device data structure as a function of the system configuration data structure.

26. The computer readable medium of claim 21, wherein the step of disassociating comprises:

disassociating the virtual device from a first driver, the first driver being a driver for an I/O component in the first slot;

associating the virtual device with a virtual driver;

identifying a second driver, the second driver being a driver for the backup I/O component in the second slot;

disassociating the virtual device from the virtual driver; and

associating the second driver with the virtual device.

27. The computer readable medium of claim 25, wherein the I/O parameter includes a plurality of I/O parameters.

28. The computer readable medium of claim 25, wherein the expected I/O device includes a plurality of expected I/O devices, and wherein the I/O parameter includes one or more I/O parameters for each of the plurality of expected I/O devices.